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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,822	01/17/2001	Hassan I. Hassan	4015-852	6488
24112	7590	04/15/2004	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2662	3
DATE MAILED: 04/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/764,822	HASSAN, HASSAN I.	
	Examiner Hanh Nguyen	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Application filed on 1/17/01.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2</u>	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Objections

Claims 13, 14, 15, 16, 19, 20, 21 and 22 are objected to because of the following informalities: the limitations of claims 13 & 19; 14 & 20; 15 & 21 and 16 & 22 are respectively duplicated. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 7, 11, 12, 13, 17, 18, 23, 24 are rejected under 35 USC 103(a) as being unpatentable over **de Seze et al.** (US pat. No. 5,822,315) in view of **Ejzak** (US pat. No. 6,389,066 B1).

In claims 1, 6 and 23, **de Seze et al.** discloses, in Fig.1, a cellular transmission between mobile station and base station using ARQ protocol. Fig.6 discloses, at step 62, quality signal of transmission channel is analyzed (examining a signal quality). If the quality signal is below a predetermined quality threshold, the system operates in a first mode of transmission (using a first mode of transmission in response to the signal quality is below the predetermined threshold). If the quality signal is greater than the predetermined quality threshold, the system operates in a second mode of transmission (using a non-ARQ transmission in response to the signal quality is

greater the predetermined threshold). See col.10, lines 20-40. **de Seze et al.** does not disclose that the first mode of transmission is ARQ protocol. **Ejzak** discloses, in Fig.3, a mobile station comprising the channel quality measurement 100. The channel quality measurement 100 determines quality of downlink channel 48, compares the quality channel with a predetermined threshold for transmitting a message to base station using ARQ protocol. See col.5, lines 65 to col.6, lines 7. **Ejzak** further discloses the mobile station 38 (see Fig.1) comprising antenna (antenna), a channel quality measurement 100 (a control logic) that compares the received signal quality and the target threshold and buffer 70 (memory) . See col.6, lines 1-10. Therefore, it would have been obvious to one ordinary skill in the art to transmit the first transmission mode of **de Seze et al.** in ARQ protocol. The motivation is to improve bandwidth usage.

In claims 11 and 17, **de Seze et al.** discloses, in Fig.1, a cellular transmission between mobile station and base station using ARQ protocol. Fig.6 discloses, at step 62, quality signal of transmission channel is analyzed (examining a signal quality). If the quality signal is below a predetermined quality threshold, the system operates in a first transmission mode (using a first mode of transmission in response to the signal quality is below the predetermined threshold). If the quality signal is greater than the predetermined quality threshold, the system operates in a second transmission mode (using a non-ARQ transmission in response to the signal quality is greater the predetermined threshold). See col.10, lines 20-40. In addition, the first transmission mode is selected if the number of bursts (message length) is greater than the predetermined threshold number or if the quality channel is below a predetermined threshold value (in response to the message being longer than a first predetermined length). See col.11, lines 10-15. **de Seze et al.** does not disclose that the first mode of transmission is ARQ protocol.

Ejzak discloses, in Fig.3, a mobile station comprising the channel quality measurement 100. The channel quality measurement 100 determines quality of downlink channel 48, compares the quality channel with a predetermined threshold for transmitting a message to base station using ARQ protocol. See col.5, lines 65 to col.6, lines 7. Therefore, it would have been obvious to one ordinary skill in the art to transmit the first transmission mode of **de Seze et al.** in ARQ protocol. The motivation is to improve bandwidth usage.

In claims 12 and 18, **de Seze et al.** discloses the first transmission mode is selected if the number of bursts (message length) is greater than the predetermined threshold number or if the quality channel is below a predetermined threshold value (in response to the message being longer than a first predetermined length). See col.11, lines 10-15. **de Seze et al.** does not disclose that the predetermined threshold number of burst is 40 bytes. However, it is a well-known skills in the art to set a message length to any size including 40 bytes order to determine whether to use the ARQ protocol or not.

In claims 2, 7, 13 and 24, **de Seze et al.** discloses the quality of channel is analyzed basedon bit error rate (BER). See col.10, lines 65-67.

Claims 16 and 22 are rejected under 35 USC 103(a) as being unpatentable over **de Seze et al.** (US pat. No. 5,822,315) in view of **Ejzak** (US pat. No.6,389,066 B1), and further in view of **Waters et al.** (US Pat. No. 6,611,776 B2).

In claims 16 and 22, **de Seze et al.** does not disclose the signal quality of channel comprises signal quality of traffic channel. **Waters et al.** discloses that the measurement of signal quality comprises bit error rate, traffic channel. See col.4, lines 1-10. Therefore, it would

have been obvious to one ordinary skill in the art to use the teaching of **Waters et al.** to measure the traffic channel quality associated with measurement of signal quality in down link channel.

Claims 3, 4, 5, 8, 9, 10, 14, 15, 20, 21 and 25 are rejected under 35 USC 103(a) as being unpatentable over **de Seze et al.** (US pat. No. 5,822,315) in view of **Ejzak** (US pat. No. 6,389,066 B1), and further in view of **Wiedeman et al.** (US pat. No. 6,240,124 B1).

In claims 3-5, 8-10, 14, 15, 20, 21 and 25, **de Seze et al.** does not disclose the signal quality comprises evaluating RSSI and BER. **Wiedeman et al.** discloses the signal quality may be a received signal strength indicator RSSI (evaluating RSSI); received bit error rate (BER). See col.14, lines 1-5. Therefore, it would have been obvious to one ordinary skill in the art to determine signal quality on downlink channel of **de Seze et al.** based on RSSI and BER values. The motivation is to determine whether the received signal is weak or strong. If the signal is weak, an ARQ mode is performed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schramm et al. (US pat. No. 6,208,663 B1) discloses method and System for Block ARQ with Reselection of FEC Coding and/or Modulation.

Raitola et al. (US pat. No. 6,289,003 B1) discloses Method for Transmitting Packet Switched Data in a Mobile Communication System.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 703 306-5445. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 703 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen



A handwritten signature in black ink, appearing to read "Hanh Nguyen".

April 14, 2004